PLC-OPT- 48DC/110DC/3RW - Solid-state relay module

2900393

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PLC-INTERFACE for railway applications, consisting of basic terminal block with push-in connection and integrated miniature solid-state relay, range: 0.7 x U_N to 1.25 x U_N, temperature range: -25°C to +70°C, 1 N/O contact, input: 48 V DC, output: 12 - 140 V DC/3 A

Your advantages

- Shock resistance in accordance with DIN 50155 (requirements in accordance with EN 61373)
- Temperature range: -25 °C ... +70 °C
- Input voltage range of 0.7 - 1.25 x UN

Commercial data

Item number	2900393
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C461
Product key	DK62AL
GTIN	4046356508988
Weight per piece (including packing)	35.82 g
Weight per piece (excluding packing)	31.89 g
Customs tariff number	85364190
Country of origin	DE

Technical data

Product properties

Product type	Solid-state relay module
Product family	PLC-INTERFACE
Application	Railway applications
Operating mode	100% operating factor

Insulation characteristics: Air clearances and creepage distances, input/output

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

Data management status

Date of last data management	01.04.2026

Electrical properties

Maximum power dissipation for nominal condition	0.26 W
Test voltage (Input/output)	2.5 kV AC (Input/output)

Air clearances and creepage distances, input/output

Rated insulation voltage	160 V
Rated surge voltage	4 kV

Input data

Nominal input voltage U_N	48 V DC
Input voltage range in reference to U_N	0.7 ... 1.25 (t < 1 s = 0.6 ... 1.4 x U_N)
Input voltage range	33.6 V DC ... 60 V DC
Switching threshold "0" signal in reference to U_N	< 0.3
Switching threshold "1" signal in reference to U_N	> 0.6
Typical input current at U_N	5.5 mA
Typical response time	400 µs
Typical turn-off time	800 µs
Operating voltage display	Yellow LED
Protective circuit	Reverse polarity protection; Series polarity protection diode
	Surge protection
Surge voltage protection	> 150 V
Transmission frequency	50 Hz

Output data

Contact switching type	1 N/O contact
Design of digital output	electronic
Output nominal voltage	110 V DC
Output voltage range	12 V DC ... 140 V DC (t < 1 s = 1.40 x U_N)
Limiting continuous current	3 A (see derating curve)

Surge voltage protection	> 150 V
Voltage drop at max. limiting continuous current	< 150 mV
Output circuit	2-conductor, floating
Protective circuit	Reverse polarity protection; Parallel polarity protection diode
	Surge protection

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.14 mm² ... 2.5 mm²
Conductor cross-section flexible	0.14 mm² ... 2.5 mm²
	0.2 mm² ... 2.5 mm² (Single ferrule)
	2x 0.5 mm² ... 1 mm² (TWIN ferrule)
Conductor cross-section AWG	26 ... 14

Dimensions

Item dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94 (Housing)	V0 (Housing)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Approvals

CE

Certificate	CE-compliant

UKCA

Certificate	UKCA-compliant

Corrosive gas test

Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

Shipbuilding approval

Certificate	TAE0000196

Shipbuilding data

Temperature	D
Humidity	A
Vibration	B
EMC	B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

EMC data

Electromagnetic compatibility	Conformance with EMC directive
Low Voltage Directive	Conformance with Low Voltage Directive

Standards and regulations

Air clearances and creepage distances, input/output

Standards/regulations	IEC 60947-5-1

Railway standard

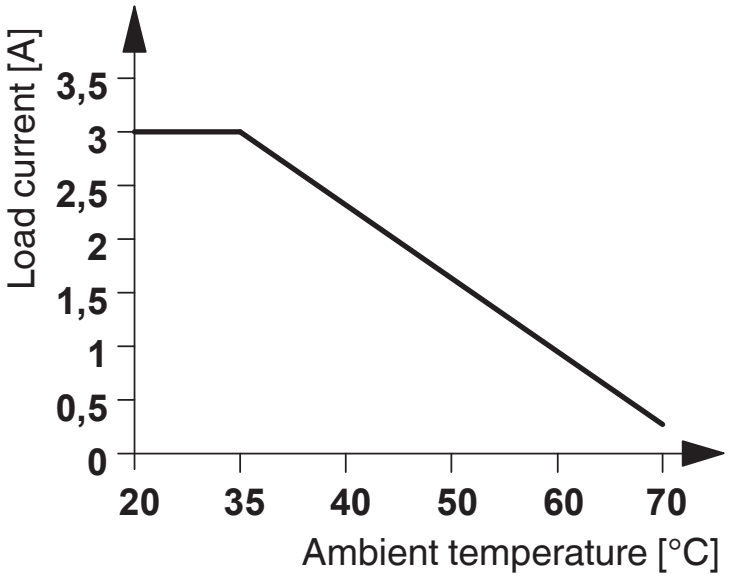
Standards/regulations	DIN EN 50155 (in relevant parts)
Standards/regulations	DNVGL-CG-0339

Mounting

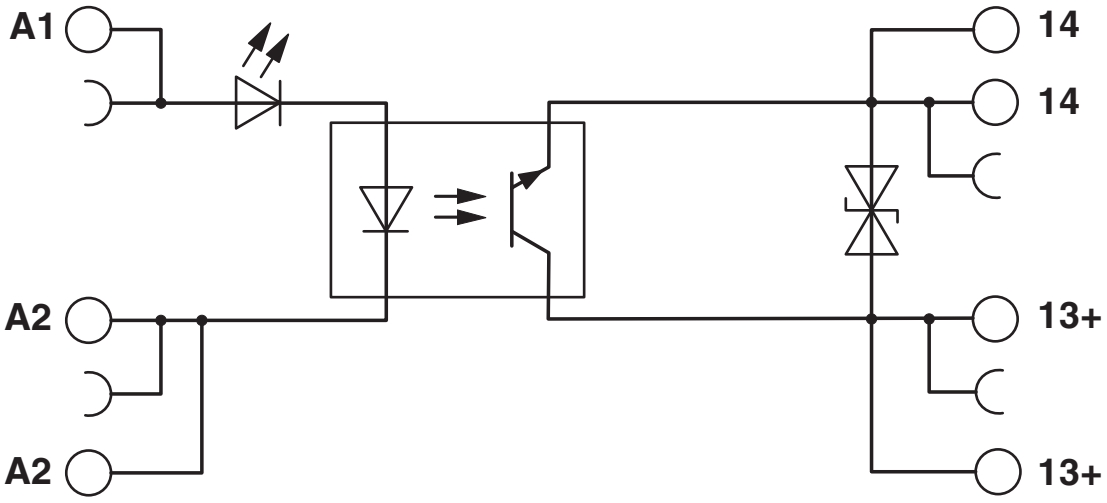
Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

Drawings

Diagram



Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2900393

cULus Listed
Approval ID: E140324

cUL Recognized
Approval ID: E238705

UL Recognized
Approval ID: E238705

UL Listed
Approval ID: FILE E 172140

cUL Listed
Approval ID: FILE E 172140

cULus Listed
Approval ID: E140324

cULus Listed
Approval ID: E140324

Classifications

ECLASS

ECLASS-13.0	27371604
ECLASS-15.0	27371604

ETIM

ETIM 10.0	EC001504

UNSPSC

UNSPSC 21.0	39122300

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	87bdf099-2937-4f4c-b366-51276acf3c52

EF3.1 Climate Change

CO2e kg	2.34 kg CO2e

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